



Forest Health Protection Pacific Southwest Region



Date: September 30, 2017

File Code: 3400

To: Patricia Grantham, Supervisor Klamath National Forest

Subject: Tree of Heaven Campground

At the request of Roger Siemers, Forest Culturist (Klamath NF), a site visit was made to Tree of Heaven Campground on May 22, 2017. The objectives were to assess the current stand conditions for insect and disease activity. Attended by Cynthia Snyder, Pete Angwin (Forest Health Protection), Roger Siemers, Todd Drake, and Karl Dietzler (Klamath NF).

Background

Tree of Heaven Campground is situated next to the Klamath Wild and Scenic River (Figure 1) approximately 12 miles northwest of Yreka at an elevation of 2,100 feet. Open May through October, the campground has 21 sites with vault toilets and drinking water

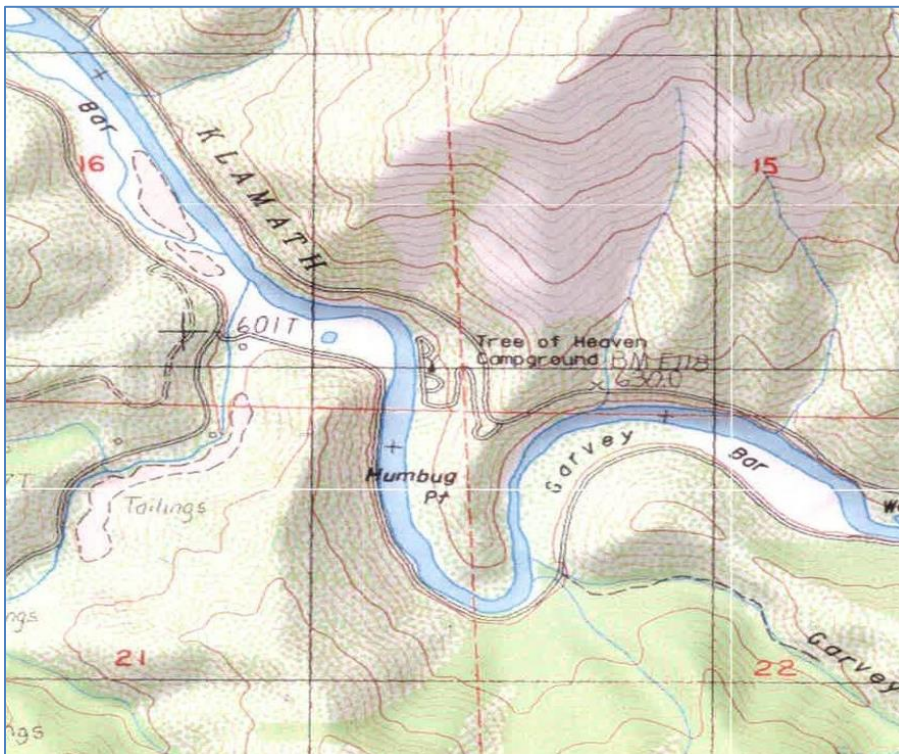


Figure 1. Topographic map showing location of Tree of Heaven Campground along Klamath River, Klamath National Forest.

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provided. Some campsites are accessible to wheelchairs with assistance. The day-use area includes a concrete ramp to the river where visitors can access the Klamath River making fishing and boating popular options. The campground also contains a quarter-mile interpretive trail and a large group day use area with a volleyball net and horseshoe pit.

Tree of Heaven Campground is the site of an historic settlement dating to the 1800s. Chinese immigrants lived and farmed on this stretch of flat land along the Klamath River where they worked in the local mines and sold vegetables to the miners. They imported a homeland tree called the Tree of Heaven to remind them of their native land. The campground features many non-native tree species including Sequoia (*Sequoiadendron giganteum*), ash (*Fraxinus* spp.), mulberry (*Morus* spp.), pear (*Pyrus* spp.), silver maple (*Acer saccharinum*), and KMX, a knobcone x Monterey pine hybrid (*Pinus attenuata* x *P. radiata*) developed in 1927 at the Institute for Forest Genetics in Placerville for fast growth and drought/frost resistance commonly planted by the Forest Service in the 1950s and 1960s on dry sites of the Siskiyou and Rogue River National Forests.

Observations

KMX hybrid is thought to be resistant to mountain pine beetle but found susceptible to diseases including western gall rust and red band needle blight. The rapid growth creates greater crown volume than the root systems can support and makes them susceptible to storm damage and stem breakage. Although the life expectancy of KMX appears unknown, the lifespan of knobcone pine is relatively short (75 to 100 years, but in a typical 60-year-old stand, over half the pines are dead) and Monterey pine is also short lived (80 to 100 years). These KMX are most likely 50-70 years old and are currently considered undesirable exotics. Drought has caused many to die back (Figure 2). Removal of the KMX has been extensive with piles of firewood being left for the campers to use (Figure 3). All stumps are being treated with borate solution per Regional directive.



Figure 2. KMX (knobcone x Monterey pine hybrid) experiencing branch dieback.

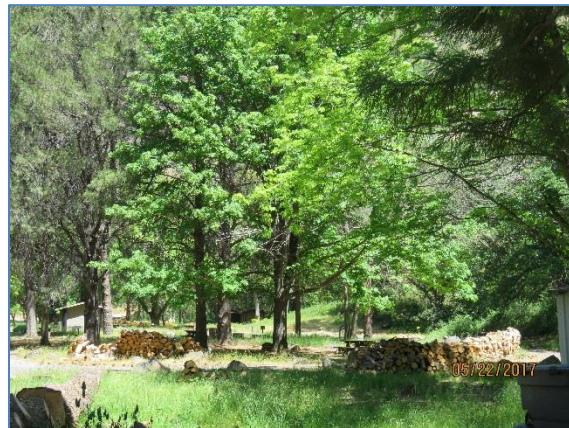


Figure 3. Piles of KMX firewood left for camper use.

Many of the ash trees may be a non-native variety and are experiencing mortality, especially further from the water's edge. A large ash tree near the entrance is an example (Figure 4). Many of the exotic hardwoods are ornamental varieties although the pear near the campground host have been known to produce fruit.

Douglas fir (*Pseudotsuga menziesii*) is also a component of the canopy. Due to the extended drought, Douglas fir pole beetles (*Pseudohylesinus nebulosus*) are causing branch dieback in many crowns (Figure 5).

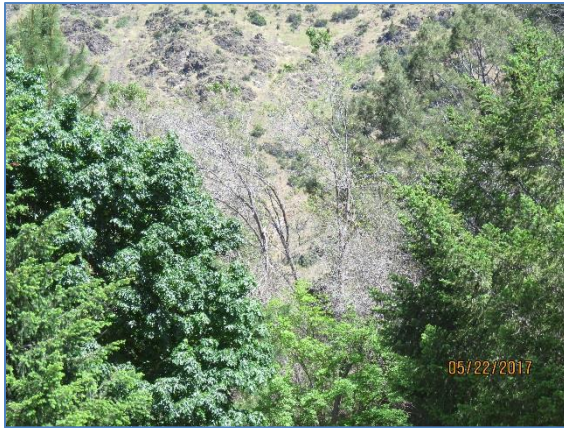


Figure 4. Dead ash tree near entrance to Tree of Heaven Campground.



Figure 5. Douglas fir pole beetle-caused branch dieback in Douglas fir.

The campground also contains many native hardwood species including black oak (*Quercus kelloggii*), coast live oak (*Quercus agrifolia*), willows (*Salix* spp.), big leaf maple (*Acer macrophyllum*), California walnut (*Juglans californica*), and California sycamore (*Platanus racemose*).

The original tree of heaven (*Ailanthus altissima*) was removed last year (Figure 6) and, as is the case with this highly invasive species, sprouts have surrounded stump and have fully occupied (with a population of poison oak) the area where the original tree was prized. The progeny of the tree are found through much of the campground and along the river edge outcompeting many of the native hardwoods.



Figure 6. Stump of the original Tree of Heaven surrounded by sprouts and poison oak.

Discussion

Plans for the future management of the campground were discussed, FHP representatives strongly suggested the District write a Vegetation management Plan for the campground and a template for such a document was forwarded to the Forest and District representatives shortly after the visit. Karl Dietzler suggested tree-mapping the campground to provide a complete inventory of the site to assist with hazard tree identification. Todd Drake has planted incense cedar seedlings in openings created by KXM removals near the host site (Figure 7). These seedlings are native and have shown good survival during the drought with care by the host. Currently, Jeff Ellison, District Recreation Officer, is treating the area with a sequence of patch cuts to remove KXM and exotic hardwoods in order to phase in native species appropriate for the area.



Figure 7. Incense cedar seedlings planted by District Cultivist, replace removed KXM.



Figure 8. The River Trail is a popular enhancement to the Tree of Heaven campground.

Plans and “wish list” items currently include continuing hazard tree removals and patch cuts of exotic species including KXM hybrids, eliminating the large day-use area to be replaced with a group camp, thinning to favor the native oak species and incense cedar allowing for Douglas fir and spacing ponderosa pine to increase drought resistance, rehabilitating the field with native grasses and forbs removing yellow star thistle and mustard species, removing tree of heaven and allowing big leaf maple and native willows to dominate along the river edge, rehabilitation of River Trail (Figure 8), leave the sequoia, and remove many of the exotic hardwoods within the campground. We still stress the need for a Vegetation Management Plan to properly maintain this valuable cultural resource.

If you have any questions regarding this report and/or need additional information, please contact Cynthia Snyder at 530-226-2437 or Pete Angwin at 530-226-2436.

/s/ Cynthia Snyder

CC: Roger Siemers, Todd Drake, Karl Dietzler, Chris Losi, Sheri Smith, Phil Cannon, Chris Fischer, Sherry Hazlehurst, and Pete Angwin